View Article Online / Journal Homepage / Table of Contents for this issue

Published on 01 January 1894. Downloaded on 25/10/2014 16:30:36.

JOURNAL

OF

THE CHEMICAL SOCIETY.

TRANSACTIONS.

Committee of Publication:

H. E. Armstrong, Ph.D., F.R.S.
Wyndham R. Dunstan, M.A., F.R.S.
F. S. Kipping, D.Sc.
R. Meldola, F.R.S.
Hugo Müller, Ph.D., F.R.S.
W. H. Perkin, LL.D., F.R.S.
W. J. Russell, Ph.D., F.R.S.
J. Millar Thomson, F.R.S.E.
T. E. Thorpe, Ph.D., F.R.S.
W. A. Tilden, D.Sc., F.R.S.
J. Walker, D.Sc., Ph.D.

Editor:
C. E. Groves, F.R.S.

Sub-Editor:
A. J. Greenaway.

1894. Vol. LXV.

LONDON:
GURNEY & JACKSON, 1, PATERNOSTER ROW.
1894.

View Article Online

Published on 01 January 1894. Downloaded on 25/10/2014 16:30:36.

LONDON:
HARRISON AND SONS, PRINTERS IN ORDINARY TO HER MAJESTY,
ST. MARTIN'S LANE.

View Article Online

CONTENTS.

PAPERS READ BEFORE THE CHEMICAL SOCIETY.

PAGE

I.—The Inertness of Quicklime. Part II. By V. H. Veley, M.A. 1

II.—Formation of Pyrroline Derivatives from Aconitic acid. By S. Ruhemann, Ph.D., M.A., and F. E. Allhusen, B.A., Jesus College 9

III.—Preparation and Properties of Bromolapachol. By Samuel C. Hooker 15

IV.—The Magnetic Rotation of Hydrogen Chloride in different Solvents: and also of Sodium Chloride and of Chlorine. By W. H. Perkin, Ph.D., F.R.S. 20

V.—Studies on Citrazinic acid. Part II. By T. H. Easterfield, M.A., and W. J. Sell, M.A., F.I.C. 28

VI.—Freezing Points of Alloys in which the Solvent is Thallium. By C. T. Heycock and F. H. Neville 31

VII.—Researches on the Terpenes. IV. Phosphorus Derivatives of Camphene. By J. E. Marsh and J. A. Gardner . 35

VIII.—Apparatus for the Extraction for Analysis of Gases dissolved in Water and other Liquids. By Edgar B. Truman, M.D., F.C.S., Borough Analyst, Nottingham . 43

IX.—Studies on the Structure of Azobenzene. The action of Bromine on Azobenzene; production of Tetrabromobenzidine. By Chas. Mills, Assoc. C.G.L.I. 51

X.—Corydaline. Part III. Oxidation with Potassium Permanganate. By James J. Dobbie, M.A., D.Sc., and Alexander Lauder 57

XI.—The Freezing Point of Triple Alloys. By C. T. Heycock and F. H. Neville 65

XII.—Conversion of Ortho- into Para-, and of Para- into Ortho-quinone Derivatives. I. The Condensation of Aldehydes with β-Hydroxy-α-naphthaquinone. By Samuel C. Hooker and William C. Carnell 76

XIII.—Synthesis of Pentamethylenecarboxylic acid, Hexamethylenecarboxylic acid (Hexahydrobenzoic acid), and Azelaïc acid. By E. Haworth, B.Sc., and W. H. Perkin, Jun., Ph.D., F.R.S. 86

Published on 01 January 1894. Downloaded on 25/10/2014 16:30:36.

View Article Online

PAGE

XIV.—The Oxides of the Elements and the Periodic Law. By R. M. Deeley, F.G.S. 106

XV.—On the Analytical Determination of probably available "Mineral" Plant Food in Soils. (Illustrated by Examination of the Permanent Barley Soil of Hoos Field, Rothamsted.) By Bernard Dyer, D.Sc. 115

XVI.—The Molecular Formulæ of some Liquids, as determined by their Molecular Surface Energy. By Emily Aston, B.Sc., and William Ramsay, Ph.D., F.R.S. 167

XVII.—Contributions to our Knowledge of the Aconite Alkaloïds. VIII. On Picraconitine. By Wyndham R. Dunstan, M.A., F.R.S., and E. F. Harrison, Demonstrator in the Research Laboratory of the Pharmaceutical Society . 174

XVIII.—Contributions to our Knowledge of the Aconite Alkaloïds. Part IX. The Effect of Heat on Aconitine and some of its Derivatives. Formation of Pyraconitine. By Wyndham R. Dunstan, M.A., F.R.S., and Francis H. Carr, Assistant Demonstrator in the Research Laboratory of the Pharmaceutical Society 176

XIX.—Notes on Madder Colouring Matters. By Edward Schunck, Ph.D., F.R.S., and Leon Marchlewski, Ph.D. . 182

XX.—Interaction of Benzylamine and Ethylic Chloracetate. By Arthur T. Mason, Ph.D., F.I.C., and Goodlatte R. Winder, Ph.D., F.I.C. 187

XXI.—Condensation Products from Benzylamine and several Benzenoïd Aldehydes. By Arthur T. Mason, Ph.D., F.I.C., and Goodlatte R. Winder, Ph.D., F.I.C. 191

XXII.—The Boiling Points of Homologous Compounds. Part I. Simple and Mixed Ethers. By James Walker, D.Sc., Ph.D., F.R.S.E. 193

XXIII.—Note on the Liberation of Chlorine during the heating of a Mixture of Potassic Chlorate and Manganic Peroxide. By Herbert McLeod 202

XXIV.—The Isomerism of the Paraffinic Aldoximes. By Wyndham R. Dunstan, M.A., F.R.S., and T. S. Dymond, F.I.C., Research Fellow of the Pharmaceutical Society . 206

XXV.—Synthesis of Indene, Hydrindene, and some of their Derivatives. By W. H. Perkin, Jun., M.D., F.R.S., and G. Révay, Ph.D. 228

XXVI.—Salts of Dehydratic acid. By J. Norman Collie, Ph.D., and H. R. Le Sueur, B.Sc. 254

XXVII.—A New Method of producing Carbon Tetrabromide. By J. Norman Collie, Ph.D., University College, London . 262

XXVIII.—Metallic Derivatives of Acetylene. I. Mercuric Acetylide. By R. T. Plimpton, Ph.D., and M. W. Travers, B.Sc. 264

Published on 01 January 1894. Downloaded on 25/10/2014 16:30:36.

View Article Online

PAGE

XXIX.—The Formation of the Hydrocarbon "Truxene" from Phenylpropionic acid, and from Hydrindone. By F. Stanley Kipping, Ph.D., D.Sc. 269

XXX.—Contributions to our Knowledge of the Aconite Alkaloïds. Part X. Further Observations on the Conversion of Aconitine into Isaconitine, and on the Hydrolysis of Aconitine. By Wyndham R. Dunstan, M.A., F.R.S., and Francis H. Carr, Assistant Demonstrator in the Research Laboratory of the Pharmaceutical Society 290

XXXI.—Examination of some recent Freezing Point Determinations. By Spencer Umfreville Pickering, F.R.S. . . 293

XXXII.—Behaviour of the more Stable Oxides at High Temperatures. Part II. By A. A. Read, Research Student, The Owens College 313

XXXIII.—Stability of the Oxides considered in relation to the Periodic Law. By G. H. Bailey, D.Sc., Ph.D., The Owens College 315

XXXIV.—Conversion of Ortho- into Para-, and of Para- into Ortho-quinone Derivatives. II. Dinapthyldiquinone. By Samuel C. Hooker and J. G. Walsh, Jun.. . . . 321

XXXV.—Action of Nitrosyl Chloride on Unsaturated Compounds. By William A. Tilden, D.Sc., F.R.S., and Martin O. Forster, Ph.D. 324

Annual General Meeting 336

XXXVI.—Fluoroplumbates and Free Fluorine. By Bohuslav Brauner, Ph.D., late Berkeley Fellow of Owens College, Professor of Chemistry in the Bohemian University, Prague 393

XXXVII.—The Magnetic Rotations of some of the Derivatives of Fatty Acids containing Halogens, also of Acetic and Propionic acids, Phosgene and Ethylic Carbonate. By W. H. Perkin, Ph.D., F.R.S. 402

XXXVIII.—Oxidation of the Alkali Metals. By Wilmot Holt and W. Edgar Sims, B.Sc., Owens College 432

XXXIX.—Volatilisation of Salts during Evaporation. (Preliminary Paper.) By G. H. Bailey, D.Sc., Ph.D. . . 445

XL.—Action of Light on Oxalic acid. By A. Richardson, Ph.D., University College, Bristol 450

XLI.—Jute Fibre Produced in England. (Second Notice.) By Andrew Pears, jun. 470

XLII.—The Natural Oxycelluloses. By C. Smith . . . 472

XLIII.—Note on the Estimation of Furfural. By C. Smith . 479

XLIV.—α-Hydrindone and Its Derivatives. Part I. By F. Stanley Kipping, Ph.D., D.Sc. 480

Published on 01 January 1894. Downloaded on 25/10/2014 16:30:36.

View Article Online

PAGE

XLV.—Sodium, Potassium, and Lithium Amides. By Arthur W. Titherley, B.Sc. 504

XLVI.—Oximidosulphonates or Sulphazotates. By Edward Divers, M.D., F.R.S., and Tamemasa Haga. 523

XLVII.—The *cis*- and *trans*-Modifications of 1 : 2-Tetramethylenedicarboxylic acid, and of 1 : 2-Pentamethylenedicarboxylic acid. By W. H. Perkin, jun. 572

XLVIII.—Hexamethylene Dibromide and its action on Sodium and on Ethylic Sodio-malonate. By E. Haworth, B.Sc., and W. H. Perkin, jun. 591

XLIX.—The Structure and Chemistry of the Cyanogen Flame. By Arthur Smithells, B.Sc., and Frankland Dent, B.Sc., the Yorkshire College, Leeds 603

L.—Influence of Moisture on Chemical Change. By H. Brereton Baker, M.A., Dulwich College 611

LI.—Notes on the Cupellation of Bismuth-silver Alloys. By Ernest A. Smith, Assoc. R.S.M., Assistant Instructor in Assaying, Royal School of Mines, London. 624

LII.—Connection between the Atomic Weight of Contained Metals and the Crystallographical Characters of Isomorphous Salts. A Comparative Crystallographical Study of the Normal Sulphates of Potassium, Rubidium, and Cæsium. By Alfred E. Tutton, Assoc. R.C.S., Demonstrator of Chemistry at the Royal College of Science, South Kensington. 628

LIII.—Conversion of Ortho- into Para- and of Para- into Ortho-quinone Derivatives. Part III. The Hydroximes of the Lapachol-group. By Samuel C. Hooker and Ellwood Wilson 717

LIV.—The Boiling Points of Homologous Compounds. Part II. By James Walker, D.Sc., Ph.D., F.R.S.E. 725

LV.—Observations on the Nature of Phosphorescence. By Herbert Jackson 734

LVI.—A Specimen of Early Scottish Iron. By Margaret D. Dougal 744

LVII.—The Maximum Molecular Deviation in the Series of the Ethereal Salts of active Diacetylglyceric acid. By Percy Frankland, Ph.D., B.Sc., F.R.S., and John MacGregor, M.A. 750

LVIII.—Observations on the Influence of Temperature on the Optical Activity of Organic Liquids. By Percy Frankland, Ph.D., B.Sc., Lond., F.R.S., and John MacGregor, M.A. 760

LIX.—The Mineral Waters of Cheltenham. By T. E. Thorpe, D.Sc., F.R.S. 772

Published on 01 January 1894. Downloaded on 25/10/2014 16:30:36.

View Article Online

PAGE

LX.—The Supposed Relation between the Solubility of a Gas and the Viscosity of its Solvent. By T. E. Thorpe, D.Sc., and J. W. Rodger, Assoc. R.C.S. 782

LXI.—The Chemical Relations of Carbon and Iron. By J. O. Arnold and A. A. Read 788

LXII.—Effect of Heat on Iodates and Bromates. I. Potassic Iodate and Bromate. By Ernest H. Cook, D.Sc. (Lond.), A.R.C.S., (Dub.). 802

LXIII.—The Magnetic Rotation of Compounds supposed to contain Acetyl, or to be of Ketonic Origin. Part II. By W. H. Perkin, PhD., F.R.S. 815

LXIV.—Studies on Citrazinic Acid. Part III. By W. J. Sell, F.I.C., M.A., and T. H. Easterfield, M.A., Ph.D. . . 828

LXV.—Azo-Compounds of the Ortho-Series. Part. III. By Raphael Meldola, F.R.S., and Edgar S. Hanes . . 834

LXVI.—Derivatives of Anthraquinone. Part III. By A. G. Perkin, F.R.S.E., and F. Cope 842

LXVII.—Colouring and other Principles contained in Mang. koudu. By A. G. Perkin and J. J. Hummel . . . 851

LXVIII.—Phenylnaphthalenes. II. β-phenylnaphthalene. By F. D. Chattaway, B.A., Christ Church, and W. H. Lewis, B.A., Jesus College, Oxford 869

LXIX.—Preparation of β-Chloronaphthalene. By F. D. Chattaway, B.A , Christ Church, and W. H. Lewis, Jesus College, Oxford 875

LXX.—Note on β-Mercurydinaphthyl and ββ-Dinaphthyl. By F. D. Chattaway, B.A., Christ Church, Oxford . . 877

LXXI.—Reduction of Paratolueneazodimethylaniline. By D. R. Boyd, B.Sc., late Donaldson Scholar of Glasgow University 879

LXXII.—Preparation of 2′ : 3′-Diphenylindoles from Benzoïn and Primary Benzenoid Amines. By Francis R. Japp, F.R.S., and T. S. Murray, D.Sc. 889

LXXIII.—Oxidation of Tartaric Acid in presence of Iron. By H. J. H. Fenton, M.A. 899

LXXIV.—The Specific Character of the Fermentative Functions of Yeast Cells. By Adrian J. Brown . . . 911

LXXV.—The Colouring Principles of Ventilago Madraspatana. By A. G. Perkin and J. J. Hummel . . . 923

LXXVI.—A Product of the Action of Nitric Oxide on Sodium Ethylate. By G. W. MacDonald, B.Sc., and Orme Masson, M.A., D.Sc. 944

LXXVII.—Derivatives of Tetramethylene. By W. H. Perkin, jun. 950

Published on 01 January 1894. Downloaded on 25/10/2014 16:30:36.

View Article Online

PAGE

LXXVIII.—1 : 2-Pentamethylenedicarboxylic Acid. By E. Haworth, B.Sc., and W. H. Perkin, jun. 978

LXXIX.—Substituted Pimelic Acids. By A. W. Crossley, B.Sc., Ph.D., Berkeley Fellow of the Owens College, and W. H. Perkin, jun. 987

LXXX.—Homologues of Butanetetracarboxylic acid and of Adipic acid. By Bevan Lean, B.A., B.Sc., Bishop Berkeley Fellow, of Owens College 995

LXXXI.—Note on the Affinities of Polybasic Acids. By Bevan Lean, B.A., D.Sc. 1024

LXXXII.—Chlorination of Aniline. By J. J. Sudborough, B.Sc., Ph.D. 1028

LXXXIII.—The Electromotive Force of Alloys in a Voltaic Cell. By A. P. Laurie, M.A. 1030

Published on 01 January 1894. Downloaded on 25/10/2014 16:30:36.